REMARKS

In response to the Office Action dated April 5, 2005, claims 67, 68, 71, 84-86 and 92-93 have been canceled without prejudice or disclaimer, and claims 65, 66, 69, 70, 94 and 96 have been amended. No new matter has been added. Reexamination and reconsideration of the claims as requested is respectfully requested.

Information Disclosure Statement

Applicants are resubmitting a new Form 1449 attached as Appendix A citing the references previously submitted on September 20, 2003. This new document contains blank fields for the Examiner to initial and sign.

Product-by-Process claim rejections

In paragraph 5 on page 7 of the Office Action, the Examiner states that claims 65, 71 and 96 all contain limitations that are deemed product-by-process, and are therefore not patentable.

Accordingly, claim 71 is cancelled, and the product-by-process limitations are removed from claims 65 and 96. Because the Examiner finds these limitations to be unpatentable, removing them from the claims does not broaden claims 65 or 96 or change the scope of claims 65 or 96 in any way. No new matter is added.

Drawing objections

In paragraph 6 on page 8 of the Office Action, the Examiner objects to various elements in claims 66-70, 84-86 and 96 as not being shown in the drawings. Claims 67, 68, 84-86 have been cancelled, and claims 66, 69 and 70 have been amended. It is believed that the drawings contain all elements in the claims.

The Examiner objects to the second multitude of areas being "swaged" (in claims 66, 69 and 70), the second multitude of areas being "elevated" (in claims 67 and 69), and the second multitude of area being "co-planar" in claims 68 and 69). Claims 67 and 68 are cancelled, and claims 66, 69 and 70 are amended accordingly, with the remaining elements being shown in FIGs. 4-6.

The Examiner objects to the first multitude of conductive probe arms having "enlarged circular elements extending from the distal ends" (claim 84), the first multitude of conductive probe arms having "elliptic elements extending from the distal ends" (claim 85), and the first multitude of conductive probe arms having "orthogonal squared elements extending from the distal ends" (claim 86). Accordingly, claims 84-86 are cancelled.

The Examiner objects to "a third multitude of conductive tip elements extending from the distal end of the first multitude of conductive probe arms" (claim 96). These tip elements are indeed shown in the drawings and described in the specification. For instance, FIG. 13 shows a probe arm 1301 with "primary tips" 1303 grown onto the arm. FIG. 14 shows various tip configurations. These various tip configurations and manufacturing schemes for them are described in the specification on pages 21-23 and in the drawings in FIGs. 13-16.

35 U.S.C. § 112 rejections

In paragraph 7 on page 9 of the Office Action, claims 66-71, 96-111, and 112-121 are rejected under 35 U.S.C. § 112 first paragraph as failing to comply with the enablement requirement. The Applicants respectfully traverse this rejection, but have amended the application to overcome the objections.

With the deletion of the claims that were objected to, the drawings as presented should be sufficient to understand the invention, to the extent that the undersigned understands the Examiner's rejection. If the § 112 rejection is reasserted, more detail is required as to why the specification is not enabling.

35 U.S.C. § 102 rejections

In paragraph 9 on page 10 of the Office Action, claims 65-70, 72, 76, 82-86, 91-96, 97, 104-111, and 120-121 are rejected under 35 U.S.C. §102(e) as being anticipated by Khandros, et al. (US 5,900,738). The Applicants respectfully traverse this rejection, but have amended the application to overcome the objections.

In paragraph 10 on page 12 of the Office Action, claims 65-121 are rejected under 35 U.S.C. §102(e) as being anticipated by Eldridge, et al. (US 6,482,013). The Applicants respectfully traverse this rejection, but have amended the application to overcome the objections.

Independent claim 65 is amended, with the limitations added to claim 65 also added to claims 94 and 96.

Claim 94 is amended to be written in independent form, containing all the limitations of its amended base claim 65, and intermediate claims 92 and 93. The scope of claim 94 is unchanged by its being written in independent form; its scope would be unchanged if it were left in dependent form. Claims 92 and 93 are cancelled.

Claim 96 is amended to be written in independent form, containing all the limitations of its amended base claim 65. The scope of claim 96 is unchanged by its being written in independent form; its scope would be unchanged if it were left in dependent form. Claim 96 also removes the unpatentable product-by-process limitations discussed above.

The Applicants assert that as amended, independent claims 65, 94 and 96 contain limitations that are not present in either Khandros or Eldridge.

To anticipate a claim, the reference must teach every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical

invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Therefore, all claim elements, and their limitations, must be found in the prior art reference to maintain a rejection based on 35 U.S.C. §102. Applicants respectfully submit that neither Khandros nor Eldridge teaches every element of claims 65, 94 and 96, and therefore both references fail to anticipate claim 65, 94 and 96.

Dependent claims 66, 69, 70, 72-83 and 87-91, which are dependent from independent claim 65, dependent claim 95, which depends from independent claim 94, and dependent claims 97-121, which are dependent from independent claim 96, were also rejected under 35 U.S.C. §102(e) as being unpatentable over Khandros and/or Eldridge. While Applicants do not acquiesce with the particular rejections to these dependent claims, it is believed that these rejections are moot in view of the remarks made in connection with independent claims 65, 94 and 96. These dependent claims include all of the limitations of the base claim and any intervening claims, and recite additional features which further distinguish these claims from the cited references. Therefore, dependent claims 66, 69, 70, 72-83, 97-91, 95 and 97-121 are also in condition for allowance.

35 U.S.C. § 103 rejections

In paragraph 13 on page 13 of the Office Action, claims 74, 75, 77-81, 87-90, 98-103, 109-110, and 112-119 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Khandros, et al. The Applicants respectfully traverse this rejection, but have amended the application to overcome the objections.

Independent claims 65, 94 and 96 all have the limitation that each conductive probe arm is in "co-planar relationship with said first surface of said supporting body along substantially the entire length of said conductive probe arms". This limitation is well supported by the specification and the drawings; see, for instance, FIGs. 4-6. In contrast, this limitation is not taught or suggested by Khandros in any way. See, for instance, FIG.

11 in Khandros, in which a conductive probe is deliberately formed as a "free-standing spring-like contact structure" (column 9, lines 48-49) Indeed, the interconnection contact structure of Khandros would not function if the arms were co-planar with the supporting body along the whole length of the arms. As a result, Khandros teaches away from a limitation of independent claims 65, 94 and 96. Therefore, independent claims 95, 94 and 96 are not obvious in view of Khandros.

Three criteria must be met to establish a *prima facie* case of obviousness. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, the prior art reference, or combination of references, must teach or suggest all the claim limitations. MPEP § 2142. Applicants respectfully traverse the rejection since the prior art fails to disclose all the claim limitations and there would be no motivation to combine the references as proposed by the Examiner.

Dependent claims 74, 75, 77-81 and 87-90, which are dependent from independent claim 65, and dependent claims 98-103, 109, 110 and 112-119, which are dependent from independent claim 96, were also rejected under 35 U.S.C. §103(a) as being unpatentable over Khandros. While Applicants do not acquiesce with the particular rejections to these dependent claims, it is believed that these rejections are moot in view of the remarks made in connection with independent claims 65, 94 and 96. These dependent claims include all of the limitations of the base claim and any intervening claims, and recite additional features which further distinguish these claims from the cited references. Therefore, dependent claims 74, 75, 77-81, 87-90, 98-103, 109, 110 and 112-119 are also in condition for allowance.

CONCLUSION

In view of the amendments and reasons provided above, it is believed that all pending claims are in condition for allowance. The amendments clarify the patentable invention without adding new subject matter. Applicants respectfully request favorable reconsideration and early allowance of all pending claims.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicants' attorney of record, Michael B. Lasky at (952) 253-4106.

Respectfully submitted,

Altera Law Group, LLC
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Date: September 6, 2005

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APPENDIX A

INFORMATION DISCLOSURE STATEMENT

PTO Form 1449

Docket Number	Serial Number
00900.0302-US-C1	10/675886
Applicant(s)	
Christian Petersen, et al.	
Filing Date	**Group Art Unit**
September 30, 2003	2858

U.S. PATENT DOCUMENTS

EXAMINER INITIALS	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE (IF APPROPRIATE)
		4,520,314	05/28/85	Asch, et al.			
		5,171,992	12/15/92	Clabes, et al.			
		5,347,226	09/13/94	Bachmann, et al.			
		5,475,318	12/12/95	Marcus, et al.			
		5,540,958	07/30/96	Bothra, et al.			
		5,557,214	09/17/96	Barnett			
		5,613,861	03/25/97	Smith, et al.			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIALS	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION	
							YES	NO
		EP 0 299 875	01/18/89	European Patent Office				
		01147374	06/09/89	Japan			Abstract	
		EP 0 466 274	01/15/92	European Patent Office				
		DE 43 01 420	06/24/93	Germany				
		WO 94/11745	05/26/94	WIPO				
		07199219	08/04/95	Japan			Abstract	
		8-15318	01/19/96	Japan				
		DE 196 48 475	06/05/97	Germany				
		EP 0 899 538	03/03/99	European Patent Office				

OTHER DOCUMENTS

		Fujii, et al., "Micropattern measurement with an atomic force microscope", Journal of Vacuum Science & Technology: Part B, Vol. 9, No. 2, pp. 666-669 (March/April 1991).
		Hong, et al., "Design and Fabrication of a Monolithic High-Density Probe Card for High-Frequency On-Water Testing", Institute of Electrical and Electronics Engineers, pp. 289-292 (December 3, 1989).
		Koops, et al., "Constructive three-dimensional lithography with electron-beam induced deposition for quantum effect devices", Journal of Vacuum Science & Technology B (Microelectronics Processing and Phenomena), Vol. 11, No. 6, pp. 2286-2289 (November/December 1993).
		Koops, et al., "Conductive dots, wires, and supertips for field electron emitters produced by electron-beam induced deposition on samples having increased temperature", Journal of Vacuum Science & Technology B (Microelectronics Processing and Phenomena), Vol. 14, No. 6, pp. 4105-4109 (November/December 1996).
		International Search Report for PCT/DK99/00391
		Lee, et al., "High-Density Silicon Microprobe Arrays for LCD Pixel Inspection", Institute of Electrical and Electronics Engineers, pp. 429-434 (February 11, 1996).
		Niu, et al., "Double-tip scanning tunneling microscope for surface analysis", Physical Review B, Vol. 51, No. 8, pp. 5502-5505 (February 15, 1995).
		Shi, et al., "New method of calculating the correction factors for the measurement of sheet resistivity of a square sample with a square four-point probe", Rev. Sci. Instrum., Vol. 68, No. 4, pp. 1814-1817 (April 1997).

Examiner:	Date Considered:

INFORMATION DISCLOSURE STATEMENT PTO Form 1449	Docket Number 00900.0302-US-C1	Serial Number 10/675886
	Applicant(s) Christian Petersen, et al.	
	Filing Date September 30, 2003	Group Art Unit 2858

		Smits, "Measurement of Sheet Resistivities with the Four-Point Probe", The Bell System Technical Journal, Vol. 37, pp. 711-718 (May 1958).

Examiner:	Date Considered: